Federal Communications Commission
Washington, D.C.

February 2, 2000

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DOCKET FILE COPY ORIGINAL

Re: Acceptance of Comments As Timely Filed in (Docket No. 96-45)

The Office of the Secretary has received your request for acceptance of your pleading in the above-referenced proceeding as timely filed due to operational problems with the Electronic Comment Filing System (ECFS). Pursuant to 47 C.F.R. Section 0.231(I), the Secretary has reviewed your request and verified your assertions. After considering arguments, the Secretary has determined that this pleading will be accepted as timely filed. If we can be of further assistance, please contact our office.

FEDERAL COMMUNICATIONS COMMISSION

William F. Caton
for Magalie Roman Salas
Secretary

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Federal-State Joint Board on Universal Service	)	CC Docket No. 96-45
	)	

MOTION OF U S WEST COMMUNICATIONS, INC. TO ACCEPT THE FILING AS TIMELY FILED

U S WEST Communications, Inc. ("U S WEST") requests the Federal Communications Commission ("Commission") to grant this Motion to Accept the (attached) Filing as Timely Filed. As grounds therefore, U S WEST states as follows:

1. Comments were due in this matter on January 19, 2000.

2. U S WEST attempted for several hours to file the attached Comments via the Electronic Comment Filing System ("ECFS") on January 19, 2000 utilizing both the main and alternate ECFS web site links. However, U S WEST was unable to receive a response from the Commission's ECFS in order to electronically transmit the Comments.

3. U S WEST attempted to transmit the attached Comments via e-mail on January 19, 2000. However, U S WEST received an e-mail from the ECFS that "ECFS was unable to process [U S WEST's] comment at 01/19/2000 18:25:17 Eastern Time due to . . . 2 data anomalies . . ."

4. U S WEST attempted to contact Commission staff members, as well as the Secretary, on January 20, 2000 to discuss the above troubles; however, due to

inclement weather conditions in the Washington, D.C. metropolitan area, apparently the Commission was very short-staffed and no contact was possible.

For the reasons set forth above, U S WEST respectfully requests the Commission to grant the instant Motion to Accept Filing as Timely Filed and enter the attached Comments of U S WEST on the record as timely filed. A proposed Order is attached for Commission approval.

Respectfully submitted,

U S WEST COMMUNICATIONS, INC.

By: Steven R. Beck by

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(303) 672-2736

Its Attorney

Of Counsel,
Dan L. Poole

January 19, 2000

ORDER

Upon review by the Federal Communications Commission of the Motion of U S WEST Communications, Inc. to Accept Filing as Timely Filed, said Motion is hereby granted and U S WEST Communications, Inc.'s Comments in the above-referenced docket are hereby accepted as timely filed.

_____

Magalie Roman Salas, Secretary

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Federal-State Joint Board on Universal Service	)	CC Docket No. 96-45
	)	

COMMENTS OF U S WEST COMMUNICATIONS, INC.

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January 19, 2000

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Before the
FEDERAL COMMUNICATIONS COMMISSION
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In the Matter of	)	
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Federal-State Joint Board on Universal Service	)	CC Docket No. 96-45
	)	

COMMENTS OF U S WEST COMMUNICATIONS, INC.

I. INTRODUCTION AND SUMMARY

U S WEST Communications, Inc. ("U S WEST") files these comments in response to the December 22, 1999 Public Notice.[1] In its comments, U S WEST addresses:

- Procedural concerns of developing a sufficient record
- Lack of data supporting a change in the bandwidth frequency
- Network constraints
- Technology alternatives
- Effect on deployment of data services
- Universal service support eligibility

The question posed in the Public Notice -- whether to alter the definition of universal service by increasing the frequency range required for "voice grade access" -- must, by statute, be referred to the Federal-State Joint Board on Universal Service ("Joint Board") before the Federal Communications Commission ("Commission") can take any action on the matter. Not only is this required by law; it is required by logic, as well.

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[1] See Public Notice, Common Carrier Bureau Seeks Comment on Requests to Redefine "Voice Grade Access" for Purposes of Federal Universal Service Support, CC Docket No. 96-45, DA 99-2985, rel. Dec. 22, 1999 ("Public Notice").

This proceeding in which the public was given one month (including the holiday season) to comment is inadequate to come to a wise conclusion on this weighty issue. Too many thorny questions need to be researched:

- Does the proposal meet statutory requirements for altering the definition of universal service (e.g., essentiality, subscribership of a substantial majority of residential customers, widespread deployment, public interest)?

- Does this proposed redefinition have anything at all to do with voice grade access, or is it really a backdoor effort to include advanced services in the definition of universal service?

- Should universal service be limited to basic services?

- What happens when the proposal fails to guarantee high-speed Internet access?

- How much will the proposal cost?

- How will the federal universal service fund pay for the proposal (as it is required to do by constitutional and statutory law)?

- Are there better technologies than wireline to provide high-speed Internet access to high-cost consumers?

- How long will the proposal take to implement?

Consequently, this proceeding should be transferred to the Joint Board for (1) a substantial investigation allowing the public to adequately assemble the technical and policy data necessary for a fair and complete airing of the issue and (2) a wise decision.

II. THE MATTER MUST BE REFERRED TO THE JOINT BOARD TO INVESTIGATE AND DEVELOP A SUFFICIENT RECORD

The Commission must refer this matter to the Joint Board for a recommendation before it can rule on the petitions.[2] Section 254 clearly requires changes to the definition of universal service be analyzed by the Joint Board prior to Commission action. Section 254(a)(1), which established the Joint Board, states in part that "the Commission shall . . . refer to [the Joint Board] a proceeding to recommend changes to any of its regulations . . . including the definition of the services that are supported by [the federal fund]." In addition, Section 254(c)(2) states in full:

> ALTERATIONS AND MODIFICATIONS -- The Joint Board may, from time to time, recommend to the Commission modifications in the definition of the services that are supported by Federal universal service support mechanisms.

Obviously then, the petitions at issue need to be referred to the Joint Board to be adequately investigated and for a recommendation to the Commission.

Moreover, there needs to be an extensive factual investigation and record developed in order to make the sort of substantial change proposed here. Section 254(c)(1) states in relevant part that the Joint Board and the Commission in considering alterations to the definition of universal service

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[2] See Petition for Reconsideration of the North Dakota Public Service Commission, Petition for Reconsideration of the South Dakota Public Utilities Commission, and Petition for Reconsideration of the Washington Utilities Commission, CC Docket Nos. 96-45, 96-262, 94-1, 91-213, 95-72, filed Feb. 12, 1998; *Ex Parte* Presentation of the Rural Utilities Service, dated Jan. 27, 1998.

shall consider the extent to which such telecommunications services --

(A) are essential to education, public health, or public safety;
(B) have, through the operation of market choices by customers, been subscribed to by a substantial majority of residential customers;
(C) are being deployed in public telecommunications networks by telecommunications carriers; and
(D) are consistent with the public interest, convenience, and necessity.

This proceeding is woefully incapable of adequately considering these factors for three reasons. First, the Joint Board has not been consulted. Second, the public has been given less than a month to prepare its comments, a time frame in which it is impossible to develop the proper record for this issue.[3] Third, the record, by statute, must consist of adequate studies of:

1. the necessity of expanding the frequency range for "education, public health, or public safety;"

2. whether "a substantial majority of residential customers" have this level of bandwidth available;

3. the extent to which the proposed frequency range is "being deployed in public telecommunications networks by telecommunications carriers;" and

4. whether enlargement of the frequency range is "consistent with the public interest, convenience, and necessity;" in other words, a determination of the costs and benefits and whether the benefits outweigh the costs.

None of these topics have been adequately developed, nor can they be adequately developed in so short a time frame. Without a sufficient record analyzing at least these issues, the Commission is barred by law from altering the frequency range.

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[3] The time period to prepare comments in the proceeding was from Dec. 22, 1999 to Jan. 19, 2000. U S WEST notes that this time frame included two popular vacation weeks for a substantial number of employees at entities interested in responding.

Based on a cursory look, it appears that the proposed frequency range does not meet any of the factors set out by statute. It does not appear necessary to education, health or safety. U S WEST is also concerned that the proposed frequency range is not the sole determinant of modem throughput and other factors must be considered. If, in fact, the Commission actually wants the public switched voice grade network to ubiquitously allow higher dial-up modem connection, it should also consider customer and Internet service provider ("ISP") modems and inside-wiring.

Finally, it is not likely to be in the public interest to expand the frequency range. The cost of expanding the current wireline network to a frequency range of 200 Hz to 3500 Hz will be gargantuan. To avoid a taking, the carriers' massive up-front investment costs must be recovered from federal and state rates. If carriers are forced to bear the cost, rather than receiving support, then the Commission would be creating an unlawful implicit subsidy.[4] This would trigger a truly huge and unnecessary increase in the amounts collected from consumers. This stunning increase in societal costs would go toward what is essentially a guarantee to persons choosing to live in high-cost areas of a substantial discount on the rate for what is essentially a rare, costly and expensive optional service. The change in the voice grade access definition could inhibit the development of alternative technologies

[4] See Texas Office of Public Util. Counsel v. FCC, 183 F.3d 393 (5th Cir. 1999) ("Texas OPUC"), aff'd. in part, remanded in part and rev'd. in part, pets. for reh'g. and reh'g. en banc denied, mandate issued Nov. 1, 1999.

that can more efficiently meet the needs of rural customers in gaining high-speed access to the Internet.

III. EXPANDING THE VOICE FREQUENCY RANGE WILL NOT NECESSARILY IMPROVE INTERNET ACCESS SPEED

Changing the bandwidth capability will not necessarily ensure increased Internet access speed. The speed of the Internet connection is dependent on more than the local network and its available bandwidth. U S WEST addresses the impacting issues below.

A. Competition Requirements To Unbundle Is Contrary To Supporting Fast Internet Speeds

Incumbent local exchange carriers, such as U S WEST, are required to design networks so individual loops can be unbundled and made available to competitive local exchange carriers. As Integrated Digital Loop Carrier ("DLC") systems cannot be reasonably unbundled, U S WEST has been forced to move from Integrated DLC to Universal DLC which results in an additional digital-to-analog conversion at the central office terminal and an additional analog-to-digital conversion at the switch. The additional two signal conversions result in decreased Internet access speed for the end user because the number of analog-to-digital and the number of digital-to-analog conversions have a significant impact on the data access speed.

Currently, there are no technologies available that allow the benefit of integrating the DLC directly into the switch while still making the unbundling of loops possible. Another network issue is that loops served by non-Integrated DLC,

even with the expanded frequency range, will likely experience an upper limit of 46 Kbps depending on the number of analog/digital conversions on the loop.

B. Existing Network Does Not Support Expanding The Frequency Range Without Significant Modifications

Existing analog carrier systems, which are predominantly in the rural areas, will not support an expansion of voice grade access to 200 Hz to 3500 Hz. These analog systems can only support frequency range of 300 Hz to 3000 Hz, thus all analog carrier systems would have to be replaced with digital carrier systems. These analog carrier systems represent the longest routes in a carrier's network, some over 50 miles in length. An analog carrier replacement is neither simple, nor inexpensive, as it involves replacing the central office terminal, the field terminal, and the intermediate line repeaters. Even the embedded DLC systems do not support a bandwidth of 200 Hz to 3500 Hz and would have to be replaced. The analog line units in all switches would also have to be replaced.

Longer copper loops, typical in the rural network, create more attenuation that will reduce Internet access speed. Existing copper loops exceeding 18,000 feet will not support the proposed expanded frequency range and would have to be redesigned to accommodate DLC systems.

The extensive network modifications related to redefining the voice grade access to 200 Hz to 3500 Hz could take ten years to complete. Furthermore, no record has been developed to show that the wider bandwidth would increase the data transport speed.

C. Internet Access Speed Impacted By More Than Local Telecommunications Network

The local loop and switch facilities are only a small piece of the total circuit used by customers to access the Internet. Internet access speeds are affected by the customer's computer and modem, each of which may limit the maximum information speed. The increased Internet access speed that may result from changing the frequency range to that proposed may provide limited benefit to customers because heavy users will still find such speeds to be less than satisfactory. Many modems in use today (pre-V.90) will not exceed 36.6 Kbps; modems built using the V.90 protocol will generally not exceed 49.333 Kbps.

The location of the ISP will also impact the overall circuit design. If the ISP is not at the same central office as the customer, there will be long distance facilities involved, over which the local exchange carrier ("LEC") has no control. The ISP's modem pool and server will also affect the maximum information speed that can be obtained.

Creating a customer expectation that they are entitled to a certain connection rate will create undue problems for the LEC since the LEC does not have end-to-end control of the circuit and therefore cannot guarantee any stated connect rate.

D. LECs Are Restricted To Available "Off-The-Shelf" Technology From Non-LEC Controlled Manufacturers

Existing DLC systems do not support the expanded frequency range proposed by the Commission. Therefore, LECs cannot rebuild their networks to meet such a requirement until there are products available. There are no industry proposals to

establish a manufacturing requirement to support the frequency range being proposed. Standards that manufacturers could use will have to be established by the industry. It could take at least two years for the industry to develop a consensus on the standard, and it would likely take at least another year before products are readily available.

Assuming no growth, new production of DLC and switch plugs that would support this expanded frequency range would likely take at least ten years. When growth is factored in, it would likely take 15 to 20 years to completely rebuild all incumbent LECs' networks to meet the proposed standard.

IV. OTHER TECHNOLOGIES ARE AVAILABLE TO MEET RURAL INTERNET ACCESS DEMAND

There are technologies using microwave or satellites that permit a user to download files from the Internet without using the landline telecommunications network. The landline telecommunications network is only required to upload to a server or to another Internet user.

Wireless service providers are currently offering Internet access, and it appears these providers will be able to expand the speed and reach of the service in the near future. An article published on January 18, 2000 "*iSky Satellite Plan to Offer High-Speed Internet Service*"[5] describes a high-speed Internet satellite service to be offered by iSky, Inc. "The company will sell its satellite dishes nationwide in retail stores for $100 to $200. The monthly Internet service will be comparable to

[5] See "*iSky Satellite Service to Offer High-Speed Internet Link*," The Denver Post, Jan. 18, 1999, Section C at 1-2.

cable modem or DSL, or a 'digital subscriber line' service, costing about $40 a month and offering connections that are about 30 times faster than dial-up phone connections." The article went on to say "that iSky will start by soliciting subscribers in the American outback who may not be the first to get high-speed wireline Internet access."

The article reinforces that new technologies that are more cost efficient will be developed in the foreseeable future. These new services may ultimately bypass the incumbent LECs' networks. There are currently extensive efforts being made within the telecommunications industry to integrate all services (voice, video and data). These efforts may result in new and better ways to reach rural customers and to provide all of these services.

V. REBUILDING THE NETWORK TO MEET THIS PROPOSED STANDARD WOULD SLOW THE IMPLEMENTATION OF AN ADVANCED DIGITAL NETWORK AND THE ULTIMATE CONVERSION OF THE VOICE SWITCHED NETWORK TO AN ALL-INCLUSIVE DATA NETWORK

The industry is currently in the state of moving from a voice switched network to a multi-service network that will support voice, video and data communications. A requirement to redesign and rebuild the existing voice grade network would slow the evolution of the network to efficiently manage and transport multiple services including voice, video and data. The evolution of the network will be extremely expensive. Requiring incumbent LECs to rebuild the voice network drains needed capital from this effort. Redefining voice grade access to 200 Hz to 3500 Hz is not a meaningful, long-term solution.

Implementing the proposed change in frequency range will also divert the equipment suppliers from the new products that must be developed to evolve the network into the multi-service platform. Technical characteristics of the network should be left to the industry-standard bodies to define so that new capabilities are not inadvertently interfered with or unduly slowed.

VI. UNIVERSAL SERVICE SUPPORT ELIGIBILITY

If the Commission were to redefine the minimum frequency range to 200 Hz to 3500 Hz, the Commission must allow carriers sufficient time to perform the necessary network upgrades and modifications. As described in Section III, increasing the frequency to all customers cannot be done overnight, let alone over a few years. U S WEST recommends a period of not less than ten years if the Commission redefines voice grade access. This time frame may not even be long enough, but it will assist in allowing local providers, vendors and customers time to prepare, without jeopardizing a carrier's eligibility to receive universal service support. Such a "hold-harmless" provision would protect consumers and carriers.

Without a sufficient time frame, customers are subject to rate shock. As described, the network modifications will be costly. The real issue the Commission must address is, if the frequency range is increased, what will be the cost and who will bear the price? In a recent proceeding in Colorado, the Public Utilities Commission ("Colorado Commission") addressed the issue of increasing data speed

standards.[6] In its studies, the Colorado Commission "Staff estimated that upgrades to the infrastructure would cost $120 to $214 million to increase speeds to 14.4 kbps."[7] This is consistent with U S WEST's studies in Colorado, which found that to upgrade the network to one-hundred percent capability to carry a data stream of 14.4 Kbps throughout Colorado would require capital investment of $120 million; and to attain 28.8 Kbps would require approximately $200 million.[8] In the Colorado proceeding, U S WEST also pointed out that compliance with these voice grade access standards does not guarantee compliance with specific data transmission speeds.

VII. CONCLUSIONS AND RECOMMENDATIONS

U S WEST is continuing to study the effects of redefining voice grade access to 200 Hz to 3500 Hz and plans to submit further supporting data in its reply comments. This proceeding and the comments being filed will not provide carriers or the Commission with sufficient data to determine if redefining voice grade access is in the public interest.

U S WEST urges the Commission to refer this matter to the Joint Board to investigate, at a minimum:

- Can modems support the proposed hertz range?

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[6] See In the Matter of Proposed Amendments to the Rules Regulating Telecommunications Service Providers and Telephone Utilities, 4 CCR 723-2, Defining Basic Local Exchange Service or Basic Service. Decision Adopted June 3, 1999.

[7] See id.

[8] See id. See also U S WEST's Initial Comments, filed Mar. 23, 1999 ("U S WEST Colorado Comments.").

- Is there any evidence that expanding the bandwidth will increase Internet access speeds?

- Testing should be conducted on typical rural loops, with different make-ups and conditions.

- What are the real costs of implementing the expanded Bandwidth, not only in terms of network investment, but also in terms of future innovations?

- Is the federal universal service fund ready to support the cost of the expanded bandwidth?

- Is it appropriate to make advanced services into universal service, or should universal service be limited to basic telecommunications services?

- Does the proposal for expanding the bandwidth meet the statutory standards for modifying the definition of universal service?

Respectfully submitted,

U S WEST COMMUNICATIONS, INC.

By: Steven R Beck by

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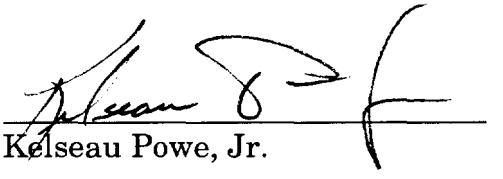
Its Attorney

Of Counsel,
Dan L. Poole

January 19, 2000

CERTIFICATE OF SERVICE

I, Kelseau Powe, Jr., do hereby certify that on the 19th day of January, 2000, I have caused a copy of the foregoing **COMMENTS OF U S WEST COMMUNICATIONS, INC.** to be served, via first class United States mail, postage prepaid, upon the persons listed on the attached service list.



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